

Exhibit 45



U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety
Administration**

January 09, 2023

1200 New Jersey Avenue, SE
Washington, DC 20590

DOT-SP 21084
(FIRST REVISION)

EXPIRATION DATE: 2026-11-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Samsung SDI America, Inc.
Auburn Hills, MI
2. PURPOSE AND LIMITATION:
 - a. This special permit authorizes the transportation in commerce of lithium battery packs in excess of 35 kg by cargo-only aircraft. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO TI) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.
 - c. No party status will be granted to this special permit.
 - d. This special permit serves as an approval under Special Provision A99 of the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180.
4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR § 172.101 Hazardous Materials Table Column (9B) in that a lithium battery may exceed 35 kg when transported by cargo aircraft, as specified herein.
5. BASIS: This special permit is based on the application of Samsung SDI America, Inc. dated September 9, 2022, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Materials Description			
Proper Shipping Name	Hazard Class/ Division	Identification Number	Packing Group
Lithium ion batteries <i>including lithium ion polymer batteries</i>	9	UN3480	N/A

7. SAFETY CONTROL MEASURES:a. OPERATIONAL CONTROLS:

- (1) The nominal watt-hour rating of a battery pack comprised of 8 battery modules may not exceed 17.2 kWh.
- (2) Each module (Model Number MP0214LT001A) comprised of 12 Samsung cells (Model Name CS00495RT001A or CS0495RM003B) has a nominal energy content of 2.14 kWh.
- (3) The state of charge for lithium ion battery packs must be not more than 30% when offered for aircraft transportation.
- (4) Each battery pack must be equipped with a battery management system capable of preventing overcharge, short-circuiting, and overdischarge.
- (5) Each battery packs must be equipped with a means of preventing dangerous reverse current flow for cells connected in parallel.
- (6) Cells and battery modules must be protected against short-circuiting.

b. TESTING REQUIREMENTS:

- (1) Each cell within the battery module must be of a type tested in accordance with the UN Manual of Tests and Criteria, 6th Revised Edition.
- (2) Each battery module within the battery pack must be of a type tested in accordance with the UN Manual of Tests and Criteria, 6th Revised Edition.

c. PACKAGING REQUIREMENTS:

- (1) This special permit authorizes transportation of battery packs, each of which has a mass of 12 kg or greater and a strong, impact-resistant outer aluminum casing;

- (2) The battery pack must be packed in a UN 4D plywood box that meets Packing Group I performance criteria. The UN 4D plywood box serves as strong outer packaging;
- (3) Not more than one battery pack is allowed per package;
- (4) The gross weight of the package may not exceed 283.3 kg (625 pounds);
- (5) The net weight of the battery pack within the package may not exceed 130 kg (287 pounds); and
- (6) Packaging must comply with the requirements in Packing Instruction 974 of the Supplement to the ICAO TI. Additionally, waste lithium battery packs and lithium battery packs being shipped for recycling or disposal are forbidden from air transport, and lithium battery packs must not be packed in the same outer packaging with substances and articles of Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids), or Division 5.1 (oxidizers).

d. **MARKING:** Each package must be marked with the special permit number "DOT-SP 21084" in accordance with § 172.301(c).

8. **SPECIAL PROVISIONS:**

- a. Under the terms of this special permit, the grantee may only offer hazardous materials (i.e., the grantee is not authorized as a carrier).
- b. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit, the HMR, and the ICAO TI.
- c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.
- d. This special permit in no way affects the need to obtain any required authorizations from other agencies of the United States Government or from the competent authorities of countries of origin, transit, destination, or the State of Operator.
- e. The special permit holder must maintain a record of all activity conducted under the authority granted in this special permit. The record must contain a complete listing and number of shipments made to include and upon request make this information available to a DOT representative or an enforcement official. The record must contain a listing and number of shipments made to include:

- (1) Dates of shipment; and
- (2) Description of each type of shipment.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
 - o Registration required by § 107.601 et seq., when applicable.

Each “Hazmat employee”, as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) — “The Hazardous Materials Safety and Security Reauthorization Act of 2005” (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term “exemption” to “special permit” and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this

Continuation of DOT-SP 21084 (1st Rev.)

Page 5
January 09, 2023

special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

A handwritten signature in blue ink, appearing to read "Dan B.", is written over a faint circular stamp.

for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-13, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at <https://www.phmsa.dot.gov/approvals-and-permits/hazmat/special-permits-search>. Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve H/NICKS